

**AMENDMENTS TO THE CLAIMS**

**This listing of claims will replace all prior versions and listings of claims in the application:**

**LISTING OF CLAIMS:**

1. (currently amended): A method, for virtually concatenating optical channels in a WDM ~~networks~~network, comprising:

providing for a plurality of frames, each frame comprising a byte reserved for a concatenation flag;

writing a same value defined in advance into the n-frame (n=1,2,3,...) concatenation byte;

and

transmitting the n frames through n respective channels in the WDM network; and

receiving the n frames,

wherein each frame is received on a same channel number assigned at the transmission side.

2. (currently amended): The method according to claim 1, A method, for further comprising:

receiving a number n of virtually concatenated signal frames in a WDM ~~networks~~network, which comprises:comprising:

receiving a first reference frame at an instant  $t_0$ ;

reading a concatenation byte value of such reference frame;  
receiving the remaining n-1 signal frames after a respective determined time t;  
reading the concatenation byte value of the remaining n-1 signal frames; and  
identifying and aligning all the signal frames with the same concatenation byte value compensating for the receiving time t in the WDM network.

3. (previously presented): A method according to claim 2, wherein the aligning of all the signal frames with the same concatenation byte value comprises:

receiving the remaining n-1 signal frames at corresponding instants  $t_1$ ;  
calculating, for each of the remaining n-1 frames, the time t elapsed from the instant at which the reference frame has been received;  
providing, for every channel, an elastic store; and  
holding steady the elastic storage of the reference channel and moving the others in dependence of the calculated times t.

4. (previously presented): A method according to claim 2, wherein the receiving of the remaining n-1 signal frames comprises:

reading a frame alignment word of the reference frame at a first instant  $t_0$ ;  
reading the frame alignment word of the remaining n-1 frames at corresponding second instants  $t_1$ ; and

calculating the time differences  $t$  between the first instant  $t_0$  and the corresponding second instants  $t_1$ .

5. (previously presented): A method according to claim 2, further comprising:  
calculating possible differences between the concatenation byte value of the reference frame and the concatenation byte value of the remaining  $n-1$  frames,

multiplying said possible differences by the frame period  $T$ , and

adding the value obtained to the respective time differences  $t$ .

6-11. (canceled).

12. (currently amended): The method for virtually concatenating optical channels in a WDM ~~networks~~network, according to claim 1, wherein the byte reserved for a concatenation flag is not fixed.

13. (canceled).

14. (new): A WDM network comprising:  
a first apparatus which virtually concatenates a plurality of optical channels, the first apparatus comprising:

a first circuit adapted to provide for a plurality of frames, each frame comprising a byte reserved for a concatenation flag indicating concatenation of the plurality of frames, and adapted to write a same pre-defined value into the concatenation flag of the plurality of frames; and

a transmitter adapted to transmit the plurality of frames over the plurality of optical channels in the WDM network;

a second apparatus comprising:

a first receiver adapted to receive the plurality of frames, wherein each frame is received on a same optical channel number assigned by the transmitter.

15. (new): The WDM network according to claim 14, wherein the first receiver is further adapted to receive a first reference frame from the plurality of frames at a time  $t_0$  and adapted to read the concatenation flag value of said first reference frame; and

wherein the second apparatus further comprises:

a second receiver adapted to receive the remaining plurality of frames after a corresponding pre-defined time  $t$  and to read the concatenation flag value of said remaining plurality of frames; and

a second circuit adapted to identify and align the plurality of frames having the same concatenation flag value.

16. (new): The method for virtually concatenating optical channels in a WDM network, according to claim 14, wherein the byte reserved for a concatenation flag is not fixed.